APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/619,025	07/19/2000	Garnet R. Chaney	03760.P001X	2227

8791   7590   06/21/2004

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD, SEVENTH FLOOR
LOS ANGELES, CA 90025

EXAMINER
NOLAN, DANIEL A

ART UNIT	PAPER NUMBER
2654	

DATE MAILED: 06/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _19 July 2000_.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-34_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-34_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _19 July 2000_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _4_.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Drawings

1.   The drawings are objected to because 222 (in figure 2) is not labeled "Yes/No".

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

-    211 (in figure 2) is not specified.

-    617 (in figure 6) is not specified.

Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3.   The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification, such as the word "processed", misspelled in line 19 (page 6).

4.   The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

        The following title is suggested: "Method And Apparatus For Generating A Language Independent Document Abstract".

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Withgott *et al*

6.   Claims 13 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by

Withgott *et al* (U.S. Patent 5,384,703 A).

7.   Regarding claims 13 and 30, Withgott *et al*, with the invention *for summarizing*

documents according to theme, reads on every feature of the claims for *identifying a*

significant phrase in a document as follows:

-   Withgott *et al* teaches the features of *reading a sequence of words from the*

    document (S20 in figure 2).

-   Withgott *et al* teaches the features of *determining a score for each word in the*

    sequence based on the length of each word (S30 in figure 2 – see column 6 lines

    21-24);

-   Withgott *et al* teaches the features of *comparing the score for each word in the*

    sequence against a threshold score (column 6 lines 25-26 – see lines 39-41);

-   Withgott *et al* teaches the features of *indicating that the sequence of words is a*

    significant phrase (i.e., *complex*, column 3 lines 42-44) *if the number of words in the*

sequence that have the score greater than the threshold score equals or exceeds a

predetermined number (column 6 lines 39-43);

- <u>Withgott</u> *et al* teaches the features of *storing the sequence of words and the number*

  of words in the sequence (S70 in figure 2), *if the sequence of words is a significant*

  phrase (S60 in figure 2).

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

Withgott *et al* & Zamora[’763]

10.   Claims 1, 10-12, 14-18, 27-29 & 31-34 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Withgott *et al* in view of Zamora[’763] (U.S. Patent 4,965,763 A).

11.   Regarding claims 1 and 18, Withgott *et al* reads on the features of the claims for

identifying a significant phrase in a document as follows:

-    Withgott *et al* teaches the features of *reading a sequence of words from the*

   document (S20 in figure 2).

-    Withgott *et al* teaches the features of *determining a score for each word in the*

   sequence based on the length of each word (S30 in figure 2 – see column 6 lines

   21-24);

-    Withgott *et al* teaches the features of *comparing the score for each word in the*

   sequence against a threshold score (column 6 lines 25-26 – see lines 39-41);

-    Withgott *et al* teaches the features of *indicating that the sequence of words is a*

   significant phrase (i.e., *complex*, column 3 lines 42-44) *if the number of words in the*

   sequence that have the score greater than the threshold score equals or exceeds a

   predetermined number (column 6 lines 39-43);

-    Withgott *et al* teaches the features of *retrieving a sentence from the document, the*

   sentence containing the sequence of words [that] *is a significant phrase* (column 6

   lines 43-46);

   Where Withgott *et al* does not speak to the details of *searching an abstract of the*

document to determine whether the sentence is included in the abstract but the well-

known process of eliminating duplicate text reflected by the disclosure that "*This summary could be formed by extracting the selected regions from the document, or by other means*" (column 4 line 68 to column 5 line 2) is expressly taught by Zamora[763], with the invention *for automatic extraction of commonly specified information from business correspondence* (column 33 lines 40-42).

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of eliminating duplicate entries to the device/method of Withgott *et al* to keep the summary as concise as possible.

12.   Regarding claims 14 and 31; the claims are set forth with the same limits as claims 13 and 30, respectively. Withgott *et al* does not speak to the details of *searching an abstract of the document to determine whether the sentence is included in the abstract* but the well-known process of eliminating duplicate text reflected by the disclosure that "*This summary could be formed by extracting the selected regions from the document, or by other means*" (column 4 line 68 to column 5 line 2) is expressly taught by Zamora[763], with the invention *for automatic extraction of commonly specified information from business correspondence* (column 33 lines 40-42).

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of eliminating duplicate entries to the device/method of Withgott *et al* to keep the summary as concise as possible.

13.   Regarding claims 10, 27, 15 & 32; the claims are set forth with the same limits as claims 1, 18, 14 & 31, respectively. Withgott *et al* teaches the feature of *including the sentence in the abstract* (S70 in figure 2) but does not specifically address the well-known precaution of avoiding duplicates. Zamora[763] teaches this further limitation of being applied *if the sentence is not included in the abstract* (column 33 lines 40-42). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Zamora[763] to the device/method of Withgott *et al* to address the well-known problem of *duplications*.

14.   Regarding claims 11, 16, 28 & 33; the claims are set forth with the same limits as claims 1, 18, 14 & 31, respectively. Withgott *et al* does not specifically address the well-known precaution of avoiding duplicates. Zamora[763] teaches the feature of *discarding the sentence if the sentence is included in the abstract* (column 33 lines 40-42). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Zamora[763] to the device/method of Withgott *et al* to avoid duplication.

15.   Regarding claims 12, 17, 29 & 34; the claims are set forth with the same limits as claims 1, 14, 18 & 31, respectively. Withgott *et al* reads on the feature where *the abstract is language independent* (column 3 lines 40-54 & column 5 line 62 to column 6 line 16).

Withgott *et al*, Zamora[763] & Chou *et al*

16.   Claims 2 and 19 and are rejected under 35 U.S.C. 103(a) as being unpatentable over Withgott *et al* in view of Zamora[763] and further in view of Chou *et al* (U.S. Patent 6,505,151 B1).

17.   Regarding claims 2 and 19; the claims are set forth with the same limits as claims 1 and 18, respectively. Withgott *et al* & Zamora[763] are silent as to *phrase delimiters.* Chou *et al*, with the invention for *dividing sentences into phrases using entropy calculations of word combinations based on adjacent words*, reads on the feature of *reading the sequence of words in the document until a phrase delimiter is detected* (12 in figure 1 – see column 6 lines 54-63).   It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Chou *et al* to the device/method of Withgott *et al* & Zamora[763] to logically constrain the set of words being processed.

Withgott *et al*, Zamora[763] & Sakurai *et al*

18.   Claims 3 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Withgott *et al* in view of Zamora[763] and further in view of Sakurai *et al* (Japan Patent 04-362699 A).

19.   Regarding claims 3 and 20; the claims are set forth with the same limits as claims 1 and 18, respectively. <u>Withgott *et al*</u> & <u>Zamora</u>'763 are silent as to *proportional scoring*. <u>Sakurai *et al*</u>, with the invention *for voice recognition* teaches the feature where *the score for the word is proportional to the number of characters in the word* (in the Constitution of the 1st page, lines 5-6). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of <u>Sakurai *et al*</u> to the device/method of <u>Withgott *et al*</u> & <u>Zamora</u>'763 so as to increase recognition as words become longer.

<u>Withgott *et al*, Zamora</u>'763<u>, Sakurai *et al* & Nunberg *et al*</u>

20.   Claims 4 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Withgott *et al*</u> in view of <u>Zamora</u>'763 and further in view of <u>Sakurai *et al*</u> and further in view of <u>Nunberg *et al*</u> (U.S. Patent Publication 2002/0002450 A1).

21.   Regarding claims 4 and 21; the claims are set forth with the same limitations as claims 3 and 20, respectively. Neither <u>Withgott *et al*</u> nor <u>Zamora</u>'763 nor <u>Sakurai *et al*</u> speak to *including numerics*. <u>Nunberg *et al*</u>, with the invention for *automatically filtering information retrieval results using text genre*, reads on the feature where *the number of characters in the word includes the number of numeric digits in the word* (¶[0064]). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of <u>Withgott *et al*</u> or <u>Zamora</u>'763 or <u>Sakurai *et al*</u> to the device/method of <u>Nunberg *et al*</u> so that the reduction

of contracting or abbreviating will not reduce the significance of contribution to the

phrase.

Withgott _et al_, Zamora[763] **& Nunberg _et al_**

22.   Claims 5-6 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Withgott _et al_ in view of Zamora[763] and further in view of Nunberg _et al_.

23.   Regarding claims 5 and 22; the claims are set forth with the same limitations as

claims 1 and 18, respectively. Neither Withgott _et al_ nor Zamora[763] speak to _including_

numerics. Nunberg _et al_, with the invention for _automatically filtering_, reads on the

feature where _the score for the word is increased for each capitalized letter in the word_

(¶[0049]). It would have been obvious to a person of ordinary skill in the art of speech

signal processing at the time of the invention to apply the method/teachings of Withgott

_et al_ or Zamora[763] or Sakurai _et al_ to the device/method of Nunberg _et al_ so that proper

nouns and acronyms will be recognized as contributing significance to the phrase.

24.   Regarding claims 6 and 23; the claims are set forth with the same limitations as

claims 1 and 18, respectively. Neither Withgott _et al_ nor Zamora[763] disclose _scoring by_

numerics and capitalizations. Nunberg _et al_ teaches the feature where _the score for the_

word is the length of the word plus the number of capitalized letters in the word (¶[0049]

lines 6-13). It would have been obvious to a person of ordinary skill in the art of speech

signal processing at the time of the invention to apply the method/teachings of Nunberg

et al to the device/method of Withgott *et al* or Zamora$^{'763}$ so that abbreviations and acronyms will be recognized as contributing significance to the phrase.

Withgott *et al*, Zamora$^{'763}$ & Zamora$^{'039}$

25.   Claims 7 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Withgott *et al* in view of Zamora$^{'763}$ and further in view of Zamora$^{'039}$ (U.S. Patent 4,773,039 A).

26.   Regarding claims 7 and 24; the claims are set forth with the same limitations as claims 1 and 18, respectively. Neither Withgott *et al* nor Zamora$^{'763}$ speak to a *table.* Zamora$^{'039}$, with the invention *for compaction and replacement of phrases*, teaches the features of *determining whether the word exists in a predetermined table* (66 in figure 3) *and retrieving the score for the word from the predetermined table* (72 in figure 3). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Zamora$^{'039}$ to the device/method of Withgott *et al* or Zamora$^{'763}$ to save typing with the ability to make replacements using previously encountered phrases.

Withgott *et al*, Zamora$^{'763}$ & Richardson *et al*

27.   Claims 8-9 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Withgott *et al* in view of Zamora$^{'763}$ and further in view of Richardson *et al* (U.S. Patent 5,926,784 A).

28.   Regarding claims 8 and 25; the claims are set forth with the same limitations as claims 1 and 18, respectively. Neither <u>Withgott *et al*</u> nor <u>Zamora</u>'763 speak to *averaging*. <u>Richardson *et al*</u>, with the invention *for natural language parsing using "podding"* *(Probability of "Descreteness")*, reads on the feature where *the threshold score is based on an average of the scores of words in the sequence of words* (column 6 line 57 to column 8 line 33 – see column 7 lines 61-63).   It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of <u>Richardson *et al*</u> to the device/method of <u>Withgott *et al*</u> or <u>Zamora</u>'763 so as to include length as a factor of significance (probability).

29.   Regarding claims 9 and 26; the claims are set forth with the same limitations as claims 8 and 25, respectively. Neither <u>Withgott *et al*</u> nor <u>Zamora</u>'763 speak to *adjusted averaging*. <u>Richardson *et al*</u> teaches the feature where *the threshold score is adjusted by a predetermined value to be different from the average of the scores of words in the sequence of words* (the *weighted average* of column 7 line 62).   It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of <u>Richardson *et al*</u> to the device/method of <u>Withgott *et al*</u> or <u>Zamora</u>'763 so as to be certain that any factor for consideration is not overwhelmed by the size of the score.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Zamora[039] (U.S. Patent 4,773,039 A) Information processing system for compaction and replacement of phrases.

- Hejna Jr. (U.S. Patent Publication 2003/0046080 A1) to determine and use audience affinity and aptitude.

- Brems *et al* (U.S. Patent 5,566,272 A) automatic speech recognition using confidence measures.

- Doddington (U.S. Patent 5,345,535 A) speech analysis.

- Ulicny *et al* (U.S. Patent 6,490,549 B1) automatic orthographic transformation of a text stream.

- Chou *et al* (U.S. Patent 6,505,151 B1) for dividing sentences into phrases using entropy calculations of word combinations based on adjacent words.

- Baker *et al* (U.S. Patent 5,210,689 A) for automatically selecting among a plurality of input modes.

- Razin *et al* (U.S. Patent 6,098,034 A) for standardizing phrasing in a document, eliminating duplications.

- Pirz *et al* (U.S. Patent 4,454,586 A) for generating speech pattern templates.

- Chen *et al*[191] (U.S. Patent 5,848,191 A) generating thematic summaries from a document image without performing character recognition.

- Su *et al* (U.S. Patent 5,418,717 A) multiple score language processing system.

- O'Donoghue (U.S. Patent 5,867,811 A) using a bilingual database including aligned

  corpora.

- Yamron *et al* (U.S. Patent 6,052,657 A) text segmentation and identification of topic

  using language models.

- Inoue (Japan Patent 64-040900) effectively utilizing method of memory in sound

  recording and reproducing system by checking the content of a recorded phrase and

  using it as a new phrase.

- Pedersen *et al*[696] (Japan Patent 06-348696) automatic identification method to

  provide an automatic identification method which ranks the document sentences to

  produce abstracts through detection of the words and/or phrases that show

  emphases.

- Pedersen *et al*[543] (U.S. Patent 5,638,543 A) for automatic document summarization,

  counting 2- or 3-letter words as being significant.

- Koyama *et al* (Japan Patent 2001-101223) document summarizing from document

  scores imparted to partial tree and the summary is synthesized.

30.   Any inquiry concerning this communication or earlier communications from the

Examiner should be directed to Daniel A. Nolan at telephone (703) 305-1368 whose

normal business hours are Mon, Tue, Thu & Fri, from 7 AM to 5 PM.

    If attempts to contact the examiner by telephone are unsuccessful, supervisor

Richemond Dorvil can be reached at (703)305-9645.

The fax phone number for Technology Center 2600 is (703)872-9314. Label

informal and draft communications as "DRAFT" or "PROPOSED", & designate formal

communications as "EXPEDITED PROCEDURE". Formal response to this action may

be faxed according to the above instructions,

or mailed to:
          P.O. Box 1450
          Alexandria, VA 22313-1450

or hand-deliver to: Crystal Park 2,
          2121 Crystal Drive, Arlington, VA,
          Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to Technology Center 2600 Customer Service Office at

telephone number (703) 306-0377.

                               Daniel A. Nolan
                               Examiner
                               Art Unit 2654

DAN/d
June 11, 2004

                               RICHEMOND DORVIL
                             SUPERVISORY PATENT EXAMINER